

PIRT Panel Activities for 2003 and 2004

This PIRT Annual Report summarizes PIRT Review Panel and Member Agency activities for 2003 and 2004. Panel activities for 2002 are reported in the 2003 PIRT Report.

The PIRT Review Panel met eight times in 2003 and seven times in 2004. The panel monitored each agency's response time to calls on complaints (see **Combined Agency Data**, above), monitored actions stemming from recommendations made in previous years, analyzed incident data to identify trends and patterns of problems related to pesticides, and responded to requests for special activities from the panel members.

The PIRT Review Panel made the following recommendations for Panel action and member agency action for 2003 and 2004. Actions taken by the PIRT Panel and member agencies in response to the recommendations are described. Those 2003 recommendations that were carried forward to 2004 are described in the 2004 section. Action recommendations that were the basis for highlighted issues for the PIRT Panel and member agencies during 2003 and 2004 are described in **Highlighted Issues**, below.

Recommendations to the PIRT Review Panel and Member Agencies for 2003

1. The PIRT Review Panel and member agencies will continue to improve tracking and reporting of the cause of pesticide-related incidents.

Action: A PIRT Panel sub-committee was created to address the cause of pesticide-related incidents and discuss options for identifying cause during inspections and investigations in 2004. For details see 2004 Action Recommendation 2.

2. The PIRT Review Panel will identify two prevention measures based on the combined incident data from all agencies.

Action:

- 1) PIRT data indicate that illnesses are occurring when label directions are not followed. The panel discussed different approaches to motivate consumers to read and follow labels and reviewed outreach materials currently available. (1) The panel discussed designing outreach material featuring PIRT statewide data that could be shared with Local Health Departments, distributed at local health fairs and the master gardener program, and posted on the PIRT website. Outreach material currently available by EPA and other organizations were reviewed. (2) The panel discussed collaboration with university communications classes or environmental studies classes in designing and implementing a pilot intervention project aimed at encouraging urban/suburban consumers to read and follow pesticide labels. University staff were approached but the task turned out to be beyond the current resources of PIRT member agencies.
- 2) PIRT data indicate that pesticide drift is the most frequent cause of pesticide-related illness. The panel drafted a letter providing PIRT data and support for universities to use in pursuing funding for continued research on pest management methods that reduce the potential for worker exposure and community exposure to pesticide drift. After multiple

drafts and review, the panel determined that it would be more effective to highlight PIRT pesticide drift data in this annual report and to provide letters of support on request to universities referencing the annual report. See **Pesticide Spray Drift and Human Health Incidents** in the Highlighted Pesticide Issues section, below. PIRT plans to further collect data on preventable causes of drift and explore best available practices for drift prevention.

3. Agencies will continue to identify independent strategies to reduce pesticide incidents based on the combined PIRT data. Department of Health and Ecology will target incidents in urban areas. The WSDA and L&I will target either urban or agricultural incidents.

Action: All PIRT member agencies identified activities to reduce pesticide incidents and reported the activities to the Panel. For details on agency prevention activities, see each agency's Prevention Activities section in the **Agency Summary Reports**, below.

4. Member agencies will explore mechanisms for improving pesticide product labeling and seek to correct "problem" labels that are inadequate or unclear.

Action: Panel members recommended breaking this recommendation into three tasks.

- 1) The PIRT report should summarize the mechanisms in place for identifying and correcting problem labels in Washington. The report could illustrate the mechanisms with recent examples such as WSDA's work on making labels more explicit to protect against bee kills. The PIRT Panel did not act on this recommendation during 2003 or 2004.
- 2) PIRT supports research into the adequacy of the Washington metam sodium labels for protecting communities from exposure to this off-gassing fumigant. Concern stems from California investigations of off-site movement of fumigant after soil treatments and several Washington complaints about acute irritant symptoms during intensive fumigation times in Benton and Franklin Counties. PIRT is supportive of work planned by Washington State University Food and Environmental Quality Lab to conduct community air monitoring during peak fumigation season in Franklin and Benton counties. The DOH and WSU have submitted three grant proposals to fund this research but so far have been unsuccessful in obtaining funding.
- 3) PIRT directs member agencies to evaluate their data for indications of non-protective labels. For instance, DOH could review cases involving field workers where the Restrictive Entry Interval was satisfied and workers still appeared to become ill from remaining residues. The PIRT Panel did not act on this recommendation during 2003 or 2004.

Greg Sorlie, Ecology Hazardous Waste and Toxics Reduction Program manager, and Dale Jensen, Ecology Spill Response Program manager, met to discuss how the two programs could improve tracking of incidents triggered by labeling problems. A field will be added to the Environmental Report Tracking System (ERTS) database to document whether pesticide spills and complaints are due to failure to read and follow labels. The two programs will coordinate the training of complaint trackers and spill response staff in collecting the data.

5. **The arrival of West Nile virus in Washington state may lead to an increase in pesticide use and, consequently, in the type of pesticide incidents monitored by PIRT. Member agencies should consider proactive steps to prevent pesticide incidents and should identify a method to track any increase in pesticide events associated with control of West Nile virus (e.g., illnesses, spills, label violations).**

Action: Activities by panel member agencies included: creating recommendations for controlling mosquitoes and West Nile virus, tracking the use of larvicides for mosquito control, tracking illnesses associated with community disease vector control and insect repellents, creating educational materials about eliminating breeding sites and the safe use of pesticides, and educating veterinarians, clinicians, pesticide applicators and the general public about West Nile virus. See Highlighted Issues, below, for a summary of PIRT Panel and member agency activities concerning West Nile virus and mosquito control.

6. **PIRT panel will review changing patterns in pesticide usage.**

Action: PIRT agencies looked at two usage issues. (1) Department of Health and WPC reviewed their data on human exposures and reported illnesses associated with residential use of diazinon and chlorpyrifos. The data show a marked decline in reported exposures and illnesses involving these compounds over the phase-out period. (2) PIRT also looked at changing patterns in illness cases associated with professional pest control in urban buildings. Department of Health compared data from the two-year period 1998-1999 with the two-year period 2002-2003 and identified a clear decline in organophosphate cases involving professional treatment for indoor pests. See **Highlighted Issues**, below, for a summary of PIRT Panel and member agency activities concerning changing pattern in pesticide.

Recommendations to the PIRT Review Panel and Member Agencies for 2004

1. **PIRT will evaluate results from the DOH investigation into underreporting of pesticide-related illnesses. PIRT Review Panel and member agencies will continue to improve reporting of pesticide-related incidents.**

Actions to evaluate results from the DOH investigation into underreporting of pesticide-related illnesses:

James VanDerslice presented findings from the DOH study *Improving Data Quality in Pesticide Illness Surveillance* at the June 17, 2004 PIRT meeting in Yakima. The full report (108 pages) is available at http://www.doh.wa.gov/ehp/oehas/publications%20pdf/Improving_Data_Quality_in_Pesticide_Illness_Surveillance-2004.pdf. The study recommended the following: (1) Work with health care providers to increase the reporting of pesticide-related illness, (2) Educate farm workers about the Workers' Compensation System and the risks of pesticides, and (3) Improve how quickly reports about pesticide illness are produced and create focused reports that answer questions from specific audiences.

The Panel discussed the study findings with members of the public attending the meeting and continued discussion at subsequent panel meetings. Discussion centered on possible collaborative activities with health care providers, with the agricultural community, and between agencies:

1. Encourage more reporting of suspected pesticide-related incidents from health care providers.
 - Re-evaluate health care provider education on reporting pesticide-related illnesses. (DOH is currently evaluating the Pesticide Program health care provider education and outreach program. DOH will ask PIRT physicians to review the program revisions.)
 - Write a one-page paper describing pesticide-related illness reporting requirements to distribute to health care providers.
2. Encourage farm workers to report illnesses.
 - The WSDA and DOH jointly develop a message for farm workers on reporting pesticide-related illness that is repeated often to reinforce the message and to reach new workers. Distribute the message where farm workers will hear it.
 - Agencies, grower organizations, and worker organizations combine resources to develop a training program that includes information on reporting and seeking care for pesticide-related illness.

Actions to improve reporting:

Department of Health staff met with health care providers in Yakima to discuss awareness of pesticide reporting requirements and to ask providers what assistance they need in the reporting of incidents.

Department of Health is working with L&I and WPC to institute electronic reporting of suspected pesticide illness cases as a means to more quickly share incident information. These reports will be delivered daily from WPC and weekly from L&I via secure Website. The software application will allow DOH staff to sort and review case reports, view details provided by the source agency, and document decisions regarding whether the reported case will be investigated.

Department of Health is also developing a system to electronically capture and report visits to selected hospitals and clinics. This will be funded by Washington's Environmental Public Health Tracking grant. This may increase the proportion of pesticide-related illnesses that are investigated and reduce some of the effort required by the physician for fulfill the reporting requirement.

Department of Labor and Industries examined ways to identify potential pesticide-related claims using alternative text search strings in the Claims database and ICD codes supplied by Health Care Providers.

Department of Natural Resources is exploring methods of communicating to forest users what a pesticide incident is and how to report these incidents. Karen Ripley described reporting requirements to foresters at the May 21, 2003 Forest Practices Program regional meeting of managers and foresters. The foresters indicated that the current system for conveying information to forest pesticide users and reporting pesticide incidents is effective. Few incidents are reported because forest pesticide use is uncommon and applications are generally removed from populated areas.

Washington State Department of Agriculture maintains a toll-free number for persons to register pesticide-related complaints or ask questions about agency regulations. Complaints identified as pesticide-related are reported to appropriate PIRT agencies.

Department of Ecology Hazardous Waste and Toxics Reduction Program and Spill Response Program staff coordinate the training of complaint trackers and spill response staff in collecting and reporting data relating to pesticide events.

2. PIRT Review Panel and member agencies will continue to improve reporting of the cause of pesticide-related incidents. PIRT will develop a tool for agencies to use in identifying possible causes of pesticide incidents.

Actions: A PIRT Panel sub-committee was created to address the cause of pesticide-related incidents and discuss options for identifying cause during inspections and investigations. Discussion addressed (1) the legal issues involved with regulatory agencies assigning cause to individual case reports, (2) PIRT agencies' differing objectives when identifying cause (for example, the DOH objective is to determine why the person became ill and the WSDA goal is to determine why the violation occurred), and (3) the possibility of using the current DOH cause-related questions as a model or tool for other PIRT agencies.

Department of Health Pilot Study on Cause-Related Questions

In 2004, DOH conducted a pilot project to evaluate the current set of interview questions and a data coding scheme for efficacy in collecting information about cause and prevention of pesticide illness. These questions were reviewed and a modified coding scheme was applied to a subset of cases from the 2002 data. Occupational and non-occupational cases were included. Two leading factors contributing to pesticide illness outcomes were (1) drift, and (2) eye protection was not worn or was inadequate. A third circumstance associated with a high number of illnesses was that no pesticide label violation was identified but the person still became exposed to a pesticide. This pilot study indicated the need to further develop methods to accurately observe and record causal factors associated with common agricultural pesticide exposure scenarios. Some recommendations from this study are to:

- Develop methods for the collection of more detailed information about the exposure.
- Develop interview and coding sheets for more efficient and consistent data collection.
- Form a work group with internal and external key pesticide safety educators to assist with further development of data collection tools and prevention messages.

Department of Health found that data on interview questions about cause and prevention were not consistently collected. Department of Health is evaluating questions pertaining to cause and to the Worker Protection Standard and will provide staff training in obtaining the data during case investigations.

The PIRT sub-committee will consider using the existing and/or revised DOH questions after the questions have been field tested.

3. PIRT Review Panel will review the results of the DOH survey of PIRT stakeholders to identify ways to improve the usefulness of PIRT data.

Action: The survey was part of the NIOSH grant “Improving Data Quality in Pesticide Illness Surveillance” (The full report is available online at the URL provided above). The **List of Stakeholders Interviewed** and **PIRT Panel Response** are provided in Appendix F. Three of the primary recommendations from stakeholders were that:

- 1) *The PIRT Annual Report should be timelier.* This report on combined two-year data for 2002 and 2003 improves the reporting turnaround time by one year, eliminating the lag time that has occurred during the past several years.
- 2) *Case overlap between agencies should be identified.* See **Combined Agency Data**, above, in which the Overlap of Pesticide-related Events by Agency is presented, along with information pertaining to difficulties associated with aggregating agency data.
- 3) *The strengths and limitations of the data should be clearly identified.* See **Combined Agency Data**, above, in which strengths and limitations for each agency’s data are described.

4. PIRT Review Panel will review WSDA and L&I data from inspections and investigations and DOH data on reported illnesses to determine whether Worker Protection Standard (WPS) violations are being reported. PIRT will provide feedback to organizations providing WPS education and enforcement.

Action: As part of their investigations, WSDA inspectors and L&I WISHA investigators complete check lists on potential violations. The WSDA and L&I provided data to PIRT on WSDA Notice of Compliance reports for 2002 and WISHA citations for WPS violations for 2003. See **Highlighted Issues**, below, for a summary of information from the WSDA study *WPS Compliance Fiscal year 2003* and the DOH evaluation of its Pesticide Program WPS interview questions.

5. PIRT Review Panel will continue to review changing patterns in pesticide usage.

Action: Department of Health, WPC and Dr. Jeff Burgess at the University of Arizona submitted a paper, “Residential phase-out of Chlorpyrifos and Diazinon: reduction in reported human exposure cases in Washington State”, to the National Poison Center Association. Initiation of the phase-out was associated with rapid reduction in human exposures reported to DOH and WPC. A downward trend in all organophosphate-related cases was noted as well. See **Highlighted Issues**, below, for additional information on changing patterns in pesticide usage.

6. Because combined PIRT data demonstrate that drift is an on-going cause of pesticide incidents, PIRT Review Panel will continue to identify means of reducing drift.

Action: PIRT agency data on pesticide drift were analyzed. The DOH data on medical outcomes and risk factors associated with drift for the years 2002 and 2003 were examined. The WSDA data on complaint investigations involving drift for the year 2003 were studied. See **Highlighted Issues**, below, for a summary of PIRT Panel and member agency activities concerning Pesticide Spray Drift and Human Health Incidents.

7. PIRT member agencies will continue to identify independent strategies to reduce pesticide incidents based on the combined PIRT data.

Action: Each PIRT agency conducted pesticide incident prevention activities. Details of these activities are listed in each agency's Prevention Activities section in the **Agency Summary Reports** below.

8. PIRT Review Panel includes all agencies involved in implementation of the cholinesterase-monitoring rule. PIRT Review Panel will compile PIRT data relevant to medical monitoring for agricultural workers who handle cholinesterase-inhibiting insecticides.

Action: See **Highlighted Issues**, below, for a brief review of 2004 Cholinesterase Monitoring Activities. For more information on the Cholinesterase Monitoring Rule, please go to the L&I cholinesterase monitoring web site at <http://www.lni.wa.gov/Safety/Topics/AtoZ/Cholinesterase/default.asp>.

9. PIRT member agencies will continue efforts to prevent possible pesticide-related illness related to mosquito control by permit restrictions and educating the public about safe mosquito control. PIRT will continue to monitor for any increase in pesticide incidents related to control of mosquitoes.

Action: The panel recommended proactive steps to prevent incidents. These steps include the development of a method to monitor pesticide events associated with control of West Nile virus, the use of permit restrictions on mosquito control applications to safeguard public health and other non-target species, and education of the public about safe mosquito control. See **Highlighted Issues**, below, for a summary of PIRT Panel and member agency activities related to mosquito control.

10. PIRT member agencies will explore mechanisms for improving pesticide product labeling and seek to correct "problem" labels that are inadequate or unclear.

Action: The DOH pesticide illness data helped identify a national problem with the packaging of prescription lindane lice shampoo. More than ten reports to DOH since 1993 involved accidental ingestions of lindane when it was confused with oral medications. Lindane is classified as a drug, not a pesticide, and is regulated by the FDA. The DOH worked with NIOSH and the FDA Medical Errors Division to address this problem. The FDA now prohibits pharmacists from repackaging lindane into oral medicine bottles. The FDA also limits the size of the lindane prescription bottles to reduce the possibility that leftover product might be stored in medicine cabinets.